

## CLAIMS

**1. (Currently Amended)** A method comprising:

receiving, by a media player, a request to play a first recorded audio file and a second audio file;

selecting a first data sample and a second data sample in the first audio file;

calculating an average output value of the first two data samples in the first audio file;

if the average value in the first audio file exceeds a threshold value,  
marking the second data sample as an effective start position associated with the  
first audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the first audio file and  
updating the average value of all selected data samples until the average  
value exceeds a threshold value;

progressively analyzing, by the media player, consecutive data  
samples of the first audio file to determine a data sample wherein an  
output threshold is reached to identify;

an effective start of audio position associated with the first audio file;

and

an effective start of fade-out position associated with the first audio file;

selecting the last two data samples in the first audio file;

calculating an average value of the last two data samples in the first audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start of fade-out position associated with the first audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the first audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

progressively analyzing consecutive data samples of the second audio file to determine a data sample wherein an output threshold is reached to identify an effective audio start position associated with the second audio file;

selecting the first two data samples in the second audio file;

calculating an average value of the first two data samples in the second audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start position associated with the second audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value;  
selecting subsequent data samples in the second audio file and updating  
the average value of all selected data samples until the average value exceeds a  
threshold value;

playing the first audio file beginning at the effective start position associated with the first audio file;

upon reaching the effective start of fade-out position associated with the first audio file:

fading-out playback of the first audio file; and

while fading-out playback of the first audio file, simultaneously fading-in playback of the second audio file beginning at the effective start position associated with the second audio file.

**2. (Previously Presented)** A method as recited in claim 1 wherein the fade-out position associated with the first audio file is located a predetermined time ahead of an effective end position associated with the first audio file.

**3. (Previously Presented)** A method as recited in claim 1 wherein the effective start position associated with the first audio file differs from an actual start position of the first audio file.

**4. (Original)** A method as recited in claim 1 further comprising fading-out playback of the second audio file upon reaching a fade-out position associated with the second audio file.

**5. (Previously Presented)** A method as recited in claim 1 wherein the effective start position associated with the first audio file and the fade-out position associated with the first audio file are stored in a media library.

**6. (Previously Presented)** A method as recited in claim 1 wherein the effective start position associated with the first audio file and the fade-out position associated with the first audio file are stored in the first audio file.

**7. (Original)** One or more computer-readable memories containing a computer program that is executable by a processor to perform the method recited in claim 1.

**8. (Previously Presented)** A method comprising:  
Receiving, by an audio cross-fade engine, a request to analyze an audio file;  
selecting the first two data samples in the audio file;  
calculating an average value of the first two data samples in the audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start position associated with the audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

marking a current data sample as an effective start position associated with the audio file; and

marking previously selected data samples as silent.

**9. (Original)** A method as recited in claim 8 wherein the average value of the data samples is calculated based on volume levels in the audio file.

**10. (Original)** A method as recited in claim 8 further comprising saving the effective start position associated with the audio file to a media library.

**11. (Original)** A method as recited in claim 8 further comprising saving the effective start position associated with the audio file to a storage device that stores the audio file.

12.       **(Original)**       A method as recited in claim 8 further comprising saving information regarding data samples marked as silent to a storage device that stores the audio file.

13.       **(Original)**       A method as recited in claim 8 wherein the effective start position is applied during subsequent playback of the audio file.

14.       **(Original)**       A method as recited in claim 8 wherein the effective start position is applied during subsequent playback of the audio file to determine a point at which the audio file begins to fade-in as a previous audio file fades out.

15.       **(Original)**       One or more computer-readable memories containing a computer program that is executable by a processor to perform the method recited in claim 8.

16.       **(Previously Presented)** A method comprising:  
receiving, by an audio cross-fade engine, a request to analyze an audio file;

selecting the last two data samples in the audio file;

calculating an average value of the last two data samples in the audio file;

if the average value exceeds a threshold value, marking the last data sample as an effective end position associated with the audio file and marking the other selected data sample as silent;

if the average value does not exceed the threshold value:

selecting previous data samples in the audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

marking a current data sample as an effective end position associated with the audio file; and

marking previously selected data samples as silent.

**17. (Original)** A method as recited in claim 16 wherein the method is performed by a media player application.

**18. (Original)** A method as recited in claim 16 further comprising saving the effective end position associated with the audio file in a media library.

**19. (Original)** A method as recited in claim 16 further comprising saving the effective end position associated with the audio file to a storage device that stores the audio file.

20.       **(Original)**       A method as recited in claim 16 wherein the average value of the data samples is calculated based on volume levels in the audio file.

21.       **(Original)**       A method as recited in claim 16 further comprising saving information regarding data samples marked as silent to a storage device that stores the audio file.

22.       **(Original)**       A method as recited in claim 16 wherein the effective end position is applied during subsequent playback of the audio file.

23.       **(Original)**       A method as recited in claim 16 wherein the effective end position is applied during subsequent playback of the audio file to determine a point at which the audio file begins to fade-out.

24.       **(Original)**       One or more computer-readable memories containing a computer program that is executable by a processor to perform the method recited in claim 16.

25.       **(Currently Amended)**   An apparatus comprising:  
a cross-fade parameter calculator configured to perform acts comprising:

~~progressively analyze consecutive data samples of a first audio file to determine a data sample wherein a output threshold is reached;~~

select a first and a second data sample in a first audio file;

calculate an average output value of the first and second data samples in the first audio file;

if the average value exceeds a threshold value, mark the second data sample as an effective start position associated with the first audio file and mark the first data sample as silent;

if the average value does not exceed the threshold value;

select subsequent data samples in the first audio file and update the average value of all selected data samples until the average value exceeds a threshold value; and

~~calculate at least one fade-out parameter associated with the first audio file;~~

select the last two data samples in the first audio file;

calculate an average value of the last two data samples in the first audio file;

if the average value exceeds a threshold value, mark the second data sample as an effective start of fade-out position-associated with the first audio file and mark the first data sample as silent;

if the average value does not exceed the threshold value;

select subsequent data samples in the first audio file and update the average value of all selected data samples until the average value exceeds a threshold value;

a media library coupled to the cross-fade parameter calculator, the media library configured to store fade-out parameters associated with a plurality of audio files, wherein the fade-out parameters are stored separate from the audio files; and

a cross-fader coupled to the media library, the cross-fader configured to apply fade-out parameters during playback of audio files.

**26. (Previously Presented)** An apparatus as recited in claim 25 wherein the cross-fade parameter calculator is further configured to calculate an effective start position associated with the first audio file.

**27. (Previously Presented)** An apparatus as recited in claim 25 wherein the cross-fade parameter calculator is further configured to calculate an effective end position associated with the first audio file.

**28. (Previously Presented)** An apparatus as recited in claim 25 wherein the cross-fader is further configured to retrieve fade-out parameters from the media library.

29.       **(Currently Amended)**     An apparatus comprising:

means for receiving a request to play a first audio file followed by a second audio file;

~~means for progressively analyzing consecutive data samples of the first audio file to determine a data sample wherein an output threshold is reached to identify a first effective start position and a fade-out position associated with the first audio file, and~~

means for selecting the first two data samples in the first audio file;

means for calculating an average value of the first two data samples in the first audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start position associated with the first audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value;

selecting subsequent data samples in the first audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

means for selecting the last two data samples in the first audio file;

means for calculating an average value of the last two data samples in the first audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start of fade-out position-associated with the first audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the first audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

means for selecting the first two data samples in the second audio file;

means for calculating an average value of the first two data samples in the second audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start position associated with the second audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

means for selecting subsequent data samples in the second audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

means for playing the first audio file beginning at the first effective start position, wherein upon reaching the fade-out position associated with the first audio file, the means for playing fades-out playback of the first audio file and begins playing the second audio file beginning at the second effective start position.

30.        **(Original)**        An apparatus as recited in claim 29 wherein the fade-out position is located a predetermined time prior to an effective end position associated with the first audio file.

31.        **(Original)**        An apparatus as recited in claim 29 wherein the means for playing fades-out playback of the second audio file upon reaching a fade-out position associated with the second audio file.

32.        **(Original)**        An apparatus as recited in claim 29 wherein the start position associated with the first audio file, the fade-out position associated with the first audio file, and the second effective start position associated with the second audio file are retrieved from a media library.

33.        **(Original)**        An apparatus as recited in claim 29 wherein the start position associated with the first audio file and the fade-out position associated with the first audio file are retrieved from the first audio file.

34.        **(Currently Amended)** One or more computer-readable storage media having stored there on a computer program that, when executed by one or more processors, causes the one or more processors to perform a method comprising:

receiving by the one or more processors a request to play a sequence of audio files;

~~progressively analyzing consecutive data samples in the sequence of audio files, yielding data to calculate an effective start position and a fade-out position associated with the first audio file;~~

~~progressively analyzing consecutive data samples of a second audio file in the sequence of audio files, yielding data to calculate an effective start position associated with a second audio file, wherein the second audio file is adjacent and subsequent to the first audio file within the sequence of audio files;~~

selecting the first two data samples in the first audio file;

calculating an average value of the first two data samples in the first audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start position associated with the first audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value:

selecting subsequent data samples in the first audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

selecting the last two data samples in the first audio file;

calculating an average value of the last two data samples in the first audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start of fade-out position-associated with the first audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value;

selecting subsequent data samples in the first audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

selecting the first two data samples in the second audio file;

calculating an average value of the first two data samples in the second audio file;

if the average value exceeds a threshold value, marking the second data sample as an effective start position associated with the second audio file and marking the first data sample as silent;

if the average value does not exceed the threshold value;

selecting subsequent data samples in the second audio file and updating the average value of all selected data samples until the average value exceeds a threshold value;

playing the first audio file beginning at the effective start position associated with the first audio file;

upon reaching the fade-out position associated with the first audio file:

fading-out playback of the first audio file; and

playing the second audio file beginning at the effective start position associated with the second audio file.

**35. (Previously Presented)** One or more computer-readable storage media as recited in claim 34 wherein the fade-out position associated with the first audio file is calculated by subtracting a predetermined time period from an effective end position associated with the first audio file.

**36. (Previously Presented)** One or more computer-readable storage media as recited in claim 34 wherein the one or more processors further fade-out playback of the second audio file upon reaching a fade-out position associated with the second audio file.

**37. (Previously Presented)** One or more computer-readable storage media as recited in claim 34 wherein the one or more processors further calculate effective start positions and fade-out positions associated with each audio file in the sequence of audio files.